is, that there is no evidence that arteriosclerosis is ever, except in the rarest instances, a generalized process. It is maintained that arteriosclerosis in most cases of persistent hypertension is not a widespread process but rather appears to exhibit a predilection for certain organs, while others are left relatively or totally uninvolved. In all the cases which were found to exhibit sustained hypertension, variable degrees of arteriosclerosis of the kidneys were found, as well as arteriosclerosis of the medulla. Therefore, if hypertension is to be ascribed to the mechanical interference or arteriolar constriction, the vascular changes in the brain, and in most cases the kidney, must constitute, at least to a great extent, the adequate obstruction.

In concluding, it is stated that the investigation has not contributed anything to the etiology of the disease, but merely offers an anatomic explanation, supported by experimental facts, for the persistent elevation of blood pressure.

The appendix presents the detailed protocols, including the clinical histories and an epitome of the salient gross and microscopic autopsy findings, of the twenty-four cases on which the work is based.

A careful study of this paper leaves one with the impression that something concrete has been added to our knowledge of hypertension in that a correlation between clinical hypertension and arteriosclerosis of the medullary vessels is regularly shown to exist, whereas arteriosclerotic cases with normal blood pressure fail to reveal marked anatomic vascular alterations in the medulla. To my knowledge, this point has never been demonstrated before, and it may lead to a further elucidation of this complex problem.

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## Dermatology

**Eczema and Disturbed Carbohydrate Metabolism**—Considerable attention has been focused recently on the association between certain cases of eczema and a disturbed carbohydrate metabolism. More and more eczema is coming to be regarded as a symptom rather than a disease entity—a symptom due to a variety of possible causes. There is just as much evidence to show that some cases of eczema are due to an intolerance to sugar, as that certain other cases are due to protein sensitization, and others to external irritating agents.

A number of investigators have definitely established the fact that hyperglycemia occurs in patients with eczema more frequently than in normal individuals. Usher and Rabinowitch[1] have attacked the problem from a new angle, by studying the amount and the rate of sugar elimination in the sweat of normal individuals as compared with patients having eczema. The sweat was collected by placing the patient between rubber sheets. Sweating was induced by hot water bottles, blankets, and the subcutaneous administration of pilocarpin.

Glucose was found to be a normal constituent of sweat. In six normal persons, in a test lasting one hour, an average of 18 mg. of glucose per 100 cc. of sweat was eliminated; the average rate of excretion was 18 mg. of glucose per hour. The rate of glucose excretion was found to be definitely increased in cases of eczema in which the tolerance for sugar was lowered as revealed by a glucose tolerance test. The total volume of sweat was also increased in such cases. A group of eight patients with eczema and a normal tolerance for sugar did not display any deviation from normal, either in the amount or the rate of glucose elimination in the sweat.

The authors believe that their findings suggest a causal relationship between the excretion of sugar in the sweat and certain cases of eczema.

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## Medicine

**A Rational Viewpoint of the Significance of Skin Tests**—Given an active extract and a favorable technique, the skin test has its definite usefulness among our diagnostic procedures. The limits of this usefulness are rather sharply defined. For one division of the general group of diseases exhibiting human hypersensitiveness, skin testing has a well known, established and definite value. This group is made up principally of the hay fevers, asthmas and a few of their concomitant skin eruptions.

A positive skin test is only the first step in the diagnosis. The second step is the proving of the contact, and that the patient reacts with each contact. We must never lose sight of the clinical facts to make a harmonious, logical, "cause and effect" relationship.

Because of the spectacular results in this group, the skin test has been carried over to other diseases of the group exhibiting human hypersensitiveness, with indefinite, sometimes misleading and often disappointing results. The reason for these failures is not difficult to understand when we analyze our positive reactions in the light of their clinical relationship. The skin test is essentially an immediate reaction. There is a growing consensus of opinion that the so-called delayed reactions are due to contamination. At any rate we depend largely on the immediate reaction. Given a case, for example, where it is known clinically that a hypersensitive manifestation occurs imme-

diately after a meal, we have a right to expect a whole food extract to give us an immediate positive skin test. But on the other hand, given a case known clinically to give rise to a delayed hypersensitive manifestation, which might imply that during the process of digestion some of the digestive products lead to hypersensitive manifestations, we have no right to expect a whole food extract to give us an immediate positive skin test; and since digestion does not occur in the tissues we should not look forward to a delayed skin reaction. When we use the skin test, then, to bring out the relationships that are not obvious clinically, we must realize here, as well, that we can only expect to pick up the immediate hypersensitive manifestations with our present-day whole food extracts. This limits the usefulness of our skin tests to food extracts.

In the groups of hay fever and asthma we are indebted to Cooke of Cornell for proving that the inhalants are of predominating etiological importance. The inhalants that are guilty must be dissolved in the mucous membrane solutions, where the factor of digestion does not play any part. We are indebted to Coca of Cornell for furnishing us active extracts in imitation mucous membrane solution. So we do have at our disposal active extracts in the inhalant group, which is the most important division in the possible etiological factors for our hay fevers and asthmas.

We must be thankful for the advances made in the usefulness of skin testing for this limited group, and we look forward to the future for the development of satisfactory extracts of foods, of drugs and of bacteria which will enable us to skin test our patients with clinical manifestations.

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## Urology

**Treatment of Renal Tuberculosis**—Two recent publications have appeared in the same number of the *British Medical Journal* pertaining to some points of general interest in the treatment of renal tuberculosis. There has been a prolonged dispute in medical literature about many points of pathogenesis of renal tuberculosis.

Pathologic studies of Hallé are probably more fundamental than any, recognizing a distinct hematogenous type of infection in contradistinction to a lymphogenous, and a third in which there is a mixed infection of these two sources of origin. But whether the tubercle bacillus causing the primary focus first lodges in a capillary in some portion of the kidney or in some portion of a tubule or in the pelvis remains unsettled. Some pathologists maintain that the tubercle bacillus lodges in the glomerulus as a small embolus and spreads from this point, others that it lodges in one of the small radicles of the secondary capillary system, usually in a papilla, while still others maintain that it gains a foothold in some portion of the tubule after having been filtered through Bowman's capsule.

Hallé believes that many infections occur by way of the lymphatics of the kidney, spreading from the hilus to the pelvic mucosa, and that others come by way of the blood stream, lodging in the parenchyma and that there are cases in which there is a mixed type of infection. From purely theoretical grounds it would seem reasonable to expect in either case that the exposure of each kidney would be equal and, if this is true, that the majority of tuberculous infections of the kidney would be bilateral. There are still a few who believe that the kidney is incapable of excreting live organisms without being injured thereby, in spite of the mass of accumulated evidence to the contrary. In almost all infectious diseases at the height of infection, such as typhoid fever, pneumonia, etc., pathogenic organisms specific of the infection can be repeatedly cultivated from the urine and there is a great deal of experimental evidence to the same effect, namely, that the healthy Bowman's capsule is capable of filtering live organisms without being injured just as it can filter other solid particles such as indigocarmin. Autopsy records seem to support the theoretical assumption that the tubercle bacillus attacks the kidney bilaterally inasmuch as autopsy records of individuals dying of tuberculosis show as much or more than 50 per cent bilateral involvement.

Recently an interesting pathologic study by Medlar appeared [1] in which the author examined by serial section a number of kidneys of individuals dying of tuberculosis, finding pathologic and microscopic evidence of tuberculosis in practically all the kidneys. Some of these involvements were very minute and apparently healed, but led the author to the conclusion that tuberculosis in all instances is bilateral. If these ideas of pathogenesis, therefore, are correct, the only conclusion is that many tuberculous lesions of the kidney heal, because the clinical evidence is very much contrary to the pathological. Clinically more than 86 per cent of the cases of tuberculosis of the kidney are definitely unilateral and it is upon this fact that the argument for immediate nephrectomy in such cases is based. Furthermore, clinically about 70 per cent of all cases of renal tuberculosis are primary in the kidney; that is, there is no clinical evidence of any active tuberculosis elsewhere in the body.

The more recent favorable results in tuberculosis of other parts of the body following heliotherapy have led many to assume that this treatment applied to renal tuberculosis would be likewise favorable. Thompson Walker,[2] however, states that in his experience renal tuberculosis cannot be cured by exposure of the patient to sunlight. Cases in which pus and tubercle bacilli have disappeared from the urine after such treatment are no proof of healing of the tuberculous lesion in the kidney. Such temporary occlusion of a tuberculous focus is known to take place without this treatment, but it is also well known that sooner or later there is reactivation of the process, with ultimately complete destruction of the kidney. The only recognized clinical cure in renal tuberculosis is with complete destruction of the kidney by the process of so-called autonephrectomy. The temporary improvement that may follow heliotherapy is moreover unfortunate because